time = 1320

9-275-B
(May 1971)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

DISCHARGE MEASUREMENT NOTES

Meas. No. .....
Comp. by MIW
Checked by .....

Sta. No. .....
W. End Anacostia

Date 19 mar, 1993 Party M.E. Wetten, Hurst

Width 47 Area ..... Vel. 2.42 G. H. 3.74 Disch. 62.2

Method .6 No. secs. 25 G. H. change 0 in .167 hrs. Susp. ROD

Method coef. 1.0 Hor. angle coef. 1.0 Susp. coef. 1.0 Meter No. .....

GAGE READINGS				
Time		Recorder	Inside	Outside
1300			3.74	
1310	S			
1350	F			
1355			3.74	
Weighted M. G. H.				
G. H. correction				
Correct M. G. H.				

Type of meter standard pygmy
Date rated 1-80 for rod, other.
Meter ..... ft. above bottom of weight.
Spin before meas. 1min 7sec after 1min 3 sec
Meas. plots .... % diff. from rating .....
Wading, ~~cable, ice, boat, upstr., downstr., side bridge~~ 100 feet, mile, above, below gage, and .....
Check-bar, found .....
changed to ..... at .....
Correct .....
Levels obtained .....

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section FIRM, SMOOTH SAND + GRAVEL

Flow FAIRLY SMOOTH + EVEN - Weather SUNNY - NICE -

Other ..... Air 24°C °F@ .....

Gage NON OPERATIONAL - Removed Water 18°C °F@ .....

Recorder for cleaning. Record removed yes - Intake flushed U .....

Observer .....

Control Sand + Gravel Channels -

Remarks gage not working - recorder submerged by flooding removed for cleaning, refurbishing. will need to replace cable too.

G. H. of zero flow ..... ft.

pH Questionable - ph = 5.0 ? - EC = 410
EQUIP. MALFUNCTION

USAV2-00003418

River at

Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for hor. angle or	Area	Discharge
	48 0	.5	0								
	47	1.5	1.14	.6	80	45	1.76			1.71	3.01
	45	2	0.82		60	43	1.39			1.64	2.28
	43		.48		80	43	1.85			.96	1.78
	41		.49		100	44	2.25			.98	2.20
	39		.50		100	40	2.47			1.00	2.47
	37		.50		100	44	2.25			1.00	2.25
	35		.50		100	41	2.41			1.00	2.41
	33		.46		150	50	2.96			.92	2.72
	31		.50		150	49	3.02			1.00	3.02
	29		.50		150	49	2.51			1.00	2.51
	27		.53		150	52	2.85			1.06	3.02
	25		.60		150	53	2.79			1.20	3.35
	23		.60		150	49	3.02			1.20	3.62
0	21		.50		150	43	3.44			1.00	3.44
	19		.51		150	42	3.52			1.02	3.59
	17		.48		150	42	3.52			.96	3.38
	15		.50		150	42	3.52			1.00	3.52
	13		.47		150	45	3.28			.94	3.08
	11		.60		100	39	2.53			1.20	3.04
	9		.57		150	47	2.11			1.14	2.41
	7		.43		150	55	2.69			.86	2.31
	5		.46		80	41	1.93			.92	1.78
	3	2	.48	.6	50	46	1.09			.96	1.05
	1	1.0	0		LEW		Turf		1350	25.67	62.17
	47										

.0 .10 .20 .30 .40 .50 .60 .70 .75

West Aravaipa

9-275-F
(May 1971)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

DISCHARGE MEASUREMENT NOTES

Meas. No. .....
Comp. by .....
Checked by .....

Sta. No. .....
West Aravaipa
Date June 17, 1993 Party Sue Morgan
Width ..... Area ..... Vel. ..... G. H. ..... Disch. 49.0
Method ..... No. secs. ..... G. H. change ..... in ..... hrs. Susp. .....
Method coef. ..... Hor. angle coef. ..... Susp. coef. ..... Meter No. .....

GAGE READINGS				
Time		Recorder	Inside	Outside
Weighted M. G. H.				
G. H. correction				
Correct M. G. H.				

Type of meter Marsh McBirney
Date rated ..... for rod, other.
Meter ..... ft. above bottom of weight.
Spin before meas. ..... after .....
Meas. plots .... % diff. from rating .....
Wading, cable, ice, boat, upstr., downstr., side bridge ..... feet, mile, above, below gage, and .....
Check-bar, found .....
changed to ..... at .....
Correct .....
Levels obtained .....

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section .....
Flow ..... Weather .....
Other ..... Air 95 °F@ .....
Gage ..... Water .....°F@ .....
..... Record removed ..... Intake flushed .....
Observer Sue Morgan
.....
Control .....
.....
Remarks Stream still slightly silty from road work in Klondyke
.....
G. H. of zero flow ..... ft.

USAV2-00003420

River at

Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for hor. angle or	Area	Discharge
LEW	7.3	~~.35~~	.0				—			0	
	8.0	~~.75~~	.39				.5			~~.39~~ .45	~~.136~~ .225
	9.5	1.5	.25				1.4			~~.25~~ .38	~~.525~~ ~~.350~~
	11.0	1.5	.29				1.0			~~.29~~ .44	~~.464~~ .440
	12.5	1.5	.23				1.1			~~.23~~ .34	~~.404~~ .380
	14.0	1.5	.32				1.6			~~.32~~ .48	~~.768~~
	15.5	1.5	.45				2.1			~~.45~~ .68	~~1.51~~ 1.43
	17.0	1.5	.49				2.5			~~.49~~ .73	~~1.96~~ 1.84
	18.5	1.5	.50				2.6			~~.50~~ .75	~~2.08~~ 1.95
	20.0	1.5	.50				2.5			~~.50~~ .75	~~2.00~~ 1.88
	21.5	1.5	.50				3.0			~~.50~~ .75	~~2.40~~ 2.25
	23.0	1.5	.70				3.0			~~.70~~ 1.05	~~3.36~~ 3.15
	24.5	1.5	.79				3.2			~~.79~~ 1.18	~~4.04~~ 3.78
	26.0	1.5	.99				3.6			~~.99~~ 1.49	~~5.70~~ 5.35
⊙	27.5	1.5	1.1				3.6			~~1.1~~ 1.65	~~6.33~~ 5.94
	29.0	1.5	1.4				3.6			~~1.4~~ 2.10	~~8.06~~ 7.56
	30.5	1.5	1.2				3.1			~~1.2~~ 1.86	~~5.95~~ 5.58
	31.5	1.2	1.1				2.9			~~1.1~~ 1.32	~~3.19~~ 3.83
	33.0	1.5	.90				1.8			~~.90~~ 1.35	~~2.59~~ 2.43
	34.5	1.5	.30				1.0			~~.30~~ .45	~~.480~~ .450
REW	36.5	1.0	.0				—			0	0
	7.3	~~28.7~~								12.4	~~53.94~~
	28.7										49.02

.0 .10 .20 .30 .40 .50 .60 .70 .75

.80 .85 .90 .92 .94 .96 .97 .98 .99 1.00 .98 .97 .96 .94 .92 .90 .85 .80

9-275-1
(May 1971)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

WATER RESOURCES DIVISION

DISCHARGE MEASUREMENT NOTES

Meas. No. .....

Comp. by .....

Checked by .....

Sta. No. .....

West Arawaipa

Date 6/22/93, 1993 Party Sue Morgan

Width 20.2 Area 14.89 Vel. 2.81 G. H. ..... Disch. 41.14

Method ..... No. secs. ..... G. H. change ..... in ..... hrs. Susp. .....

Method coef. ..... Hor. angle coef. ..... Susp. coef. ..... Meter No. .....

GAGE READINGS				
Time		Recorder	Inside	Outside
1040			2.88	
Weighted M. G. H.				
G. H. correction				
Correct M. G. H.				

Type of meter Marsh McBirney

Date rated ..... for rod, other.

Meter ..... ft. above bottom of weight.

Spin before meas. ..... after .....

Meas. plots .... % diff. from rating .....

Wading, cable, ice, boat, upstr., downstr., side bridge ..... 60 feet mile, above, below gage, and .....

Check-bar, found .....

changed to ..... at .....

Correct .....

Levels obtained .....

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section .....

Flow Swift, bumbly Weather Mostly clear

Other ..... Air .....°F@ .....

Gage ..... Water 23.7 °F@ C

..... Record removed ..... Intake flushed U L .....

Observer .....

.....

Control .....

.....

Remarks .....

PH 9.0 Electro 24

Fairly smooth gravel bottom. Slightly silty.

G. H. of zero flow ..... ft.

USAV2-00003422

River at--

Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for hor. angle or	Area	Discharge
	1.0	.5	0				0				0
	2.0	1	.29				.10			.29	.029
	3.0	1	.19				.09			.19	.017
	4		.53				1.40			.53	.742
	5		.55				1.52			.55	.459
	6		.51				1.58			.51	.805
	7		.59				1.99			.59	1.17
	8		.62				2.35			.62	1.45
	9		.70				2.99			.70	2.09
	10		.85				3.20			.85	2.72
	11		.89				3.00			.89	2.67
	12		.95				3.15			.95	2.99
	13		1.05				3.35			1.05	3.51
	14		1.09				3.60			1.09	3.92
⊙	15		1.12				3.75			1.12	4.20
	16		1.10				3.75			1.10	4.12
	17		1.10				3.35			1.10	3.68
	18		1.02				3.15			1.02	3.21
	19		.81				2.75			.81	2.22
	20		.62				1.85			.62	1.14
	21	1	.01				.02			.01	0
	21.2	.2	0				0			0	0
	20.2	20.2								14.89	41.14

0 .10 .20 .30 .40 .50 .60 .70 .75

USAV2-00003423

West Hrawaipa

9-275-F
(May 1971)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

Meas. No. .....
Comp. by .....
Checked by .....

DISCHARGE MEASUREMENT NOTES

Sta. No. .....
West Hrawaipa Creek at Gaging Station
Date 7/6/93, 19 93 Party Sue Morgan
Width 18.3 Area 14.04 Vel. 3.00 G. H. ..... Disch. 42.17
Method ..... No. secs. ..... G. H. change ..... in ..... hrs. Susp. .....
Method coef. ..... Hor. angle coef. ..... Susp. coef. ..... Meter No. .....

GAGE READINGS				
Time		Recorder	Inside	Outside
			2.75	
Weighted M. G. H.				
G. H. correction				
Correct M. G. H.				

Type of meter Marsh McBirney
Date rated ..... for rod, other.
Meter ..... ft. above bottom of weight.
Spin before meas. ..... after .....
Meas. plots .... % diff. from rating .....
Wading, cable, ice, boat, upstr., downstr., side bridge ..... 60 feet, mile, above, below gage, and .....
Check-bar, found .....
changed to ..... at .....
Correct .....
Levels obtained .....

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section Sand and gravel cobbles
Flow Swift, burbly Weather Hot, Sunny
Other ..... Air .....°F@ .....
Gage ..... Water .....°F@ 26.5°C
..... Record removed ..... Intake flushed U .....
Observer .....
Control .....
Remarks .....
PH 8.5 Electro 26
G. H. of zero flow ..... ft.

USAV2-00003424

River at--

Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for hor. angle or	Area	Discharge
	3	1.0	0				0				0
	4	1.5	.30				.80			.45 ~~.30~~	.36 ~~.24~~
	5	↓	.25				.49			.25	.12
	6		.29				.80			.29	.23
	7		.37				1.42			.37	.52
	8		.51				2.12			.51	1.08
	9		.65				2.59			.65	1.68
	10		.83				2.50			.83	2.07
	11		.92				3.02			.92	2.77
	12		1.05				3.49			1.05	3.66
	13		1.20				3.72			1.20	4.46
	14		1.27				3.98			1.27	5.05
	15		1.29				3.99			1.29	5.14
	16		1.20				3.85			1.20	4.62
⊙	17		1.13				3.32			1.13	3.75
	18		1.00				3.19			1.00	3.19
	19		.92				2.59			.92	2.38
	20		.65				1.72			.65	1.11
	21		.21				.51			.24 ~~.21~~	.12 ~~.10~~
	21.3	~~.3~~	0				0			0	~~42.17~~
	18.3	18.3								~~14.07~~ 14.22	42.31

.0 .10 .20 .30 .40 .50 .60 .70 .75

USAV2-00003425

9-475-F
(May 1971)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

DISCHARGE MEASUREMENT NOTES

Meas. No. .....
Comp. by .....
Checked by .....

Sta. No. .....
West Arawapa Creek at Gagny Station

Date July 23, 1993 Party Sue Morgan

Width 23.5 Area 14.79 Vel. 2.92 G. H. ..... Disch. 43.27

Method 6 No. secs. ..... G. H. change ..... in ..... hrs. Susp. Rod

Method coef. ..... Hor. angle coef. ..... Susp. coef. ..... Meter No. .....

GAGE READINGS				
Time		Recorder	Inside	Outside
0915			2.79	
Weighted M. G. H.				
G. H. correction				
Correct M. G. H.				

Type of meter Marsh McBirney

Date rated .... for rod, other.

Meter ..... ft. above bottom of weight.

Spin before meas. .... after .....

Meas. plots .... % diff. from rating .....

Wading, cable, ice, boat, upstr., downstr., side bridge ..... at 200 feet, mile, above, below gage, and .....

Check-bar, found .....

changed to ..... at .....

Correct .....

Levels obtained .....

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section Gravel Bottom

Flow Swift, fairly smooth Weather Clear

Other ..... Air .....°F@ .....

Gage 2.79 Water .....°F@ 24.6

..... Record removed ..... Intake flushed U .....

Observer .....

.....

Control .....

pH 9.2 Electro 25

Remarks Creek silty and channel rearranged from flooding 1½ weeks ago — moved upstream further to take measurements.

G. H. of zero flow ..... ft.

Hell Hole reported to still be running high

USAV2-00003426

River at--

Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for hor. angle or	Area	Discharge
	5.5	.25 0	0								0
	6	.35	.22				.69			.11	.12
	7	1.0	.40				.98			.40	.392
	8	1.0	.48				1.92			.48	.921
	9		.73				2.10			.73	1.538
	10		.83				2.65			.83	2.19
	11		.92				2.80			.92	2.57
	12		.92				2.99			.92	2.75
	13		.93				3.25			.93	3.02
	14		.94				3.55			.94	3.33
	15		.97				3.72			.97	3.60
	16		.80				3.69			.80	2.95
	17		.91				4.12			.91	3.74
	18		.74				3.68			.74	2.72
0	19		.82				3.77			.82	3.09
	20		.80				3.62			.80	2.89
	21		.68				3.01			.68	2.04
	22		.42				2.23			.42	.936
	23		.38				2.05			.38	.779
	24		.30				1.65			.30	.495
	25		.41				1.98			.41	.811
	26		.49				2.10			.49	1.02
	27		.50				1.99			.50	.995
	28	.1	.31				1.40			.31	.434
	29	.0	0				0			0	0
	23.5	23.5									
										~~14.79~~ 14.85	43.31

.0 .10 .20 .30 .40 .50 .60 .70 .73

9-275-F
(May 1971)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

DISCHARGE MEASUREMENT NOTES

Meas. No. .....
Comp. by .....
Checked by .....

Sta. No. .....

Date August 8, 1993 Party Sue Morgan

Width 36.5 Area 16.43 Vel. 2.22 G. H. ..... Disch. 36.5

Method ..... No. secs. ..... G. H. change ..... in ..... hrs. Susp. .....

Method coef. ..... Hor. angle coef. ..... Susp. coef. ..... Meter No. .....

GAGE READINGS				
Time		Recorder	Inside	Outside
			2.90	
Weighted M. G. H.				
G. H. correction				
Correct M. G. H.				

Type of meter Marsh McBirney

Date rated ..... for rod, other.

Meter ..... ft. above bottom of weight.

Spin before meas. ..... after .....

Meas. plots .... % diff. from rating .....

Wading, cable, ice, boat, (upstr.) downstr., side bridge .....150..... feet, mile (above) below (gage) and .....

Check-bar, found .....

changed to ..... at .....

Correct .....

Levels obtained .....

Measurement rated excellent (2%), (good (5%)), fair (8%), poor (over 8%), based on following conditions: Cross section firm sand & gravel, cobbles, a few boulders.

Flow Swift, fairly smooth Weather Mostly Clear

Other ..... Air .....°F@ 32.1

Gage ..... Water .....°F@ 28.7

..... Record removed ..... Intake flushed U .....

Observer .....

Control .....

Remarks Creek has flooded again recently - rearranging the sand channel again, some boulders may have affected reading
Electro - 29 PH - 9.2

G. H. of zero flow ..... ft.

USAV2-00003428

River at --

Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for hor. angle or	Area	Discharge
	4.3	~~.85~~	.39					.01		~~.22~~	0
	5.0	1.7	.32					.42		.22	.094
	6.5	1.5	.88					.32		.88	.281
	8.0	1.5	.76					2.17		1.14	2.47
	9.5		.60					1.99		.90	1.79
	11.0		.40					1.87		.74	1.38
	12.5		.31					1.66		.46	.763
	14.0		.39					1.98		.58	1.14
	15.5		.48					2.17		~~.64~~ .72	1.56
	17.0		.45					2.57		.67	1.72
	18.5		.42					2.73		.63	1.71
	20		.50					2.59		.75	1.94
	21.5		.55					2.81		.82	2.30
	23.0		.67					2.93		1.0	2.93
⊙	24.5		.72					3.22		1.0	3.22
	26.00		.73					3.29		1.09	3.58
	27.5		.65					2.90		.97	2.81
	29.0		.66					2.63		.99	2.60
	30.5		.59					2.01		.88	1.76
	32.0		.54					1.58		.81	1.27
	33.5	1.5	.50					1.12		.75	.840
	35.0	1.5	.29					.80		.43	.344
	~~35.8~~ 36.5	~~.8~~ 1.5	0					0		~~0~~ 16.43	~~36.5~~

.0 .10 .20 .30 .40 .50 .60 .70 .75

9-275-F
(May 1971)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

WATER RESOURCES DIVISION

DISCHARGE MEASUREMENT NOTES

Meas. No. .....

Comp. by .....

Checked by .....

Sta. No. .....

West Arauaipa

Date 8/22, 19 93 Party Sue Morgan

Width ..... Area 18.17 Vel. 2.54 G. H. ..... Disch. 46.21

Method ..... No. secs. ..... G. H. change ..... in ..... hrs. Susp. .....

Method coef. ..... Hor. angle coef. ..... Susp. coef. ..... Meter No. .....

GAGE READINGS				
Time		Recorder	Inside	Outside
			2.81	
Weighted M. G. H.				
G. H. correction				
Correct M. G. H.				

Type of meter Marsh McBirney

Date rated 8/22/93 for rod, other.

Meter ..... ft. above bottom of weight.

Spin before meas. ..... after .....

Meas. plots .... % diff. from rating .....

Wading, cable, ice, boat, upstr., downstr., side bridge 150 feet, mile, above, below gage, and .....

Check-bar, found .....

changed to ..... at .....

Correct .....

Levels obtained .....

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section Smooth gravel bar w/boulders on edges

Flow ..... Weather .....

Other ..... Air .....°F@ 30.7

Gage ..... Water .....°F@ 28.8

..... Record removed ..... Intake flushed U .....

Observer .....

Control .....

Remarks PH 9.1 Electro 280

G. H. of zero flow ..... ft.

USAV2-00003430

Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for hor. angle or	Area	Discharge
	5	5 @	0								
	6	1	.38				.21			.38	.079
	7.5	1.5	.61				.83			.915	.759
	9	1.5	.71				1.78			1.06	1.88
	10.5	1.5	.57				2.05			.855	1.75
	12	1.5	.52				2.52			.780	1.96
	13.5	1.5	.46				2.49			.690	1.71
	15		.42				2.57			.630	1.61
	16.5		.53				2.65			.795	2.10
	18		.52				2.58			.780	2.01
	19.5		.55				2.31			.825	1.90
	21		.48				2.30			.720	1.65
	22.5		.47				2.67			.705	1.88
	24		.42				2.80			.630	1.76
	25.5		.40				2.68			.600	1.61
	27		.53				3.09			.795	2.45
	28.5		.51				3.10			.765	2.37
	30		.68				3.52			1.02	3.59
	31.5		.59				3.39			.885	3.00
	33		.72				3.29			1.08	3.55
	34.5		.69				3.32			1.03	3.41
	36		.62				3.14			.93	2.92
	37.5		.52				2.72			.780	2.12
	39		.20				.50			.300	.150
	40.5		.15				.05			.15 ~~.225~~	.010 ~~.04~~
	41	.5	0				0			0	~~46.22~~
	36									18.17	46.21

.0 .10 .20 .30 .40 .50 .60 .70 .75

USAV2-00003431

9-275-B
(May 1971)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

DISCHARGE MEASUREMENT NOTES

Meas. No. .....
Comp. by .....
Checked by .....

Sta. No. .....
West Arawaipa

Date 9/6, 19 93 Party Sue Morgan

Width ..... Area ..... Vel. ..... G. H. ..... Disch. 46.78

Method ..... No. secs. ..... G. H. change ..... in ..... hrs. Susp. .....

Method coef. ..... Hor. angle coef. ..... Susp. coef. ..... Meter No. .....

GAGE READINGS				
Time		Recorder	Inside	Outside
0940			2.79	
Weighted M. G. H.				
G. H. correction				
Correct M. G. H.				

Type of meter Marsh McBirney
Date rated 9/6/93 for rod, other.
Meter ..... ft. above bottom of weight.
Spin before meas. ..... after .....
Meas. plots .... % diff. from rating .....
Wading, cable, ice, boat, upstr., (downstr.) side
bridge 100 feet, mile, above (below)
(gage) and .....
Check-bar, found .....
changed to ..... at .....
Correct .....
Levels obtained .....

Measurement rated excellent (2%), good (5%), (fair (8%)) poor (over 8%), based on following conditions: Cross section Smooth gravel bottom, cliff face on one side

Flow ..... Weather Fair Sunny

Other ..... Air 29.8°C

Gage ..... Water 22.8°C

..... Record removed ..... Intake flushed U

Observer .....

Control .....

Remarks pH 9.1 Electro 280
pH Meter died shortly after reading

G. H. of zero flow ..... ft.

USAV2-00003432

Any coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for hor. angle or	Area	Discharge
	27.0	~~0~~ .75	0				0				
	25.5	~~1.5~~ 1.25	.10				.25			.13	.03
	24.0	1.5	.19				.60			.29	.17
	22.5	1.5	.30				1.13			.45	.51
	21.0	1.5	.41				1.62			.62	1.00
	19.5	1.5	.69				2.39			1.04	2.49
	18.0	1.5	.82				2.33			1.23	2.87
	16.5	1.5	.85				3.20			1.28	4.10
	15.0	1.5	.80				3.22			1.20	3.86
	13.5	1.5	.82				3.61			1.23	4.44
	12.0	1.5	.69				3.80			1.04	3.95
	11.0	1.0	.81				3.73			.81	3.02
	10	1.0	.75				3.34			.75	2.51
	9	1.0	.72				3.65			.72	2.63
⊙	8		.61				3.59			.61	2.19
	7		.60				3.27			.60	1.96
	6		.59				3.21			.59	1.89
	5		.60				2.90			.60	1.74
	4		.60				2.81			.60	1.69
	3		.72				2.95			.72	2.12
	2		.80				2.51			.80	2.01
	1	1.0	.72	Edge of Cliff						.72	1.60
										16.03	46.78

.0 .10 .20 .30 .40 .50 .60 .70 .75

USAV2-00003433

9-275-F
(May 1971)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

WATER RESOURCES DIVISION

DISCHARGE MEASUREMENT NOTES

Meas. No. .....

Comp. by .....

Checked by .....

Sta. No. .....

West Arawapa - Wilderness Boundary

Date 9-18-93, 19..... Party Sue Morgan

Width ..... Area ..... Vel. ..... G. H. ..... Disch. 44.77

Method ..... No. secs. ..... G. H. change ..... in ..... hrs. Susp. .....

Method coef. ..... Hor. angle coef. ..... Susp. coef. ..... Meter No. .....

GAGE READINGS				
Time		Recorder	Inside	Outside
			2.80	
Weighted M. G. H.				
G. H. correction				
Correct M. G. H.				

Type of meter Marsh McBirney

Date rated ..... for rod, other.

Meter ..... ft. above bottom of weight.

Spin before meas. ..... after .....

Meas. plots .... % diff. from rating .....

Wading, cable, ice, boat, upstr., downstr., side bridge ..... 50 feet, mile, above, below gage, and .....

Check-bar, found .....

changed to ..... at .....

Correct .....

Levels obtained .....

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section Sand & gravel - split channel

Flow ..... Weather Fair, sunny

Other ..... Air .....°F@ 23.2C

Gage ..... Water .....°F@ 19.6C

..... Record removed ..... Intake flushed .....

Observer .....

Control .....

Remarks Electro 250 Flood 2 weeks ago removed about 1 foot depth of sand/gravel away from gauging station. Stream still somewhat silty today

G. H. of zero flow ..... ft.

Gravel stream bottom is now about 1 foot below the bottom of the bottom door opening on the gauging station. [illegible] of the ladder is about 1 foot [illegible]

USAV2-00003434

Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for hor. angle or	Area	Discharge
	1.7	0.5	0				0				
	2.0	~~.5~~ .90	.20				.63			.18	.11
	3.5	1.5	.40				1.80			.60	1.08
	5.0	1.5	.42				2.27			.63	1.43
	6.5	↓	.62				3.19			.93	2.97
	8.0	↓	.80				3.72			1.20	4.46
	9.5		.83				3.13			1.25	3.91
	11.0		.71				2.99			1.07	3.20
	12.5		.69				3.10			1.04	3.22
	14.0		.70				2.98			1.05	3.13
	15.5		.72				3.03			1.08	3.27
	17.0		.65				3.20			.98	3.14
	18.5		.68				3.32			1.02	3.39
	20.0		.72				3.50			1.08	3.78
⊙	21.5		.88				3.44			1.29	4.50
	23.0		.72				2.37			1.08	2.56
	24.5	1.	.23				.13			.23	.03
	25.0	2.0 ~~.50~~	0				0			0	0
	28.5	2.0 ~~3.5~~	0				0			0	0
	29.0	1.00 ~~.50~~	.10				0			.10	0
	30.5	1.5	.15				.23			.23	.05
	32.0	~~1.5~~	.20				.80			.30	.24
	33.5	1.5	.21				.83			.32	.27
	35.0	1.5	.10				.18			.15	.03
	37.0	1.5 .75	0				0			15.81	44.77

0 .10 .20 .30 .40 .50 .60 .70 .75

9-275-B
(May 1971)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

WATER RESOURCES DIVISION

DISCHARGE MEASUREMENT NOTES

Meas. No. .....

Comp. by .....

Checked by .....

Sta. No. .....

West Aravaipa

Date 10-2-93, 1993 Party Sue Morgan

Width ..... Area ..... Vel. ..... G. H. ..... Disch. 42.18

Method ..... No. secs. ..... G. H. change ..... in ..... hrs. Susp. .....

Method coef. ..... Hor. angle coef. ..... Susp. coef. ..... Meter No. .....

GAGE READINGS				
Time		Recorder	Inside	Outside
Weighted M. G. H.				
G. H. correction				
Correct M. G. H.				

Type of meter Marsh McBirney

Date rated 10-2-93 for rod, other.

Meter ..... ft. above bottom of weight.

Spin before meas. ..... after .....

Meas. plots .... % diff. from rating .....

Wading, cable, ice, boat, upstr., downstr., side bridge 150 feet, mile, above, below gage, and .....

Check-bar, found .....

changed to ..... at .....

Correct .....

Levels obtained .....

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section Rough cobble bottom, swift current

Flow ..... Weather Sunny, clear, warm

Other ..... Air .....°F@ 30.6C

Gage ..... Water .....°F@ 21.3C

..... Record removed ..... Intake flushed U L .....

Observer .....

Control .....

Remarks Stream slightly silty

Electro 280

G. H. of zero flow ..... ft.

USAV2-00003436

Angle coef.	Dist. from initial point	Width	Depth	Observation depth	Rev-olutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for hor. angle or	Area	Discharge
	5.8	[illegible]	0				0				
	6.0	.2	.36				.65			.25	.16
	7.0	1.0	.24				.91			.24	.22
	8.0	1.0	.29				1.10			.29	.32
	9		.30				1.49			.30	.45
	10		.31				1.63			.31	.50
	11		.37				1.76			.37	.65
	12		.40				2.12			.40	.85
	13		.45				2.38			.45	1.07
	14		.55				1.49			.55	.82
	15		.51				2.59			.51	1.32
	16		.59				2.78			.59	1.64
	17		.67				3.00			.67	2.01
	18		.86				2.91			.86	2.50
	19		.95				3.72			.95	3.53
	20		1.15				3.67			1.15	4.22
	21		1.17				4.39			1.17	5.14
	22		.98				4.18			.98	4.10
	23		.85				4.62			.85	3.93
	24		.81				3.99			.81	3.23
	25		.80				3.30			.80	2.64
	26		.61				2.97			.61	1.81
	27		.40				2.12			.40	.85
	28		.20				1.12			.20	.22
	29	.5	0				0			0	42.18
										13.70	

1 Fixed Wing over ACWB EW 1500 1530
1 FW . . . . . SN 2000 1530

9-275-F
(May 1971)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

Meas. No. .....
Comp. by .....
Checked by .....

DISCHARGE MEASUREMENT NOTES

Sta. No. .....

West Aravaipa

Date October 16, 1973 Party Sue Morgan

Width ..... Area ..... Vel. ..... G. H. ..... Disch. 40.75

Method ..... No. secs. ..... G. H. change ..... in ..... hrs. Susp. .....

Method coef. ..... Hor. angle coef. ..... Susp. coef. ..... Meter No. .....

GAGE READINGS				
Time		Recorder	Inside	Outside
			2.80	
Weighted M. G. H.				
G. H. correction				
Correct M. G. H.				

Type of meter .....

Date rated ..... for rod, other.

Meter ..... ft. above bottom of weight.

Spin before meas. ..... after .....

Meas. plots .... % diff. from rating .....

Wading, cable, ice, boat, upstr., downstr., side

bridge ....20.... feet, mile, above, below

gage, and .....

Check-bar, found .....

changed to ..... at .....

Correct .....

Levels obtained .....

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section Smooth gravel, sand bars, split channel

Flow cliff face on right side Weather Cloudy, scattered rain

Other ..... Air .....°F@ 28.6

Gage ..... Water .....°F@ 20.2

..... Record removed ..... Intake flushed .....

Observer .....

.....

Control .....

.....

Remarks Stream slightly silty. Floods from over 1/2 weeks ago have deposited sand bar around gauging station - level w bottom of bottom door

G. H. of zero flow ..... ft.

USAV2-00003438

Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for ~~hor. angle or~~ area	Area	Discharge
	31	0.5	0								
	32	1.0	.18				0.20		.15		.03
	34	2.0	.20				.43		.40		.17
	36	2.0	.20				.57		.40		.23
	38		.05				0		.10		0
	40		.62				2.62		1.24		3.25
	42		.81				3.31		1.62		5.36
	44		.70				3.67		1.40		5.14
	46		.62				3.19		1.24		3.96
	48		.69				3.27		1.38		4.51
	50		.72				3.47		1.44		5.00
	52		.80				2.89		1.60		4.62
	54		.72				2.36		1.44		3.40
	56		.38				1.68		.76		1.28
	58		.30				1.42		.60		.85
	60		.15				0		.30		0
	62		.15				0		.30		0
	64		.15				0		.30		0
	~~66~~		~~.17~~				~~.50~~				
	68		.20				2.10		.40		.84
	68	.5	.32				2.32		.48		1.11
	69	1.0	.50				2.86		.35		1.00
	69.2	.2	0				0		15.90		40.75

.0 .10 .20 .30 .40 .50 .60 .70 .71

9-427A-b
(May 1921)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

DISCHARGE MEASUREMENT NOTES

Meas. No. .....
Comp. by .....
Checked by .....

Sta. No. .....
West Arawaipa

Date 12/1/9 19 93 Party Sue Morgan

Width ..... Area ..... Vel. ..... G. H. ..... Disch. 39.04

Method ..... No. secs. ..... G. H. change ..... in ..... hrs. Susp. .....

Method coef. ..... Hor. angle coef. ..... Susp. coef. ..... Meter No. .....

GAGE READINGS				
Time		Recorder	Inside	Outside
			2.50	
Weighted M. G. H.				
G. H. correction				
Correct M. G. H.				

Type of meter Marsh McBirney

Date rated ..... for rod, other.

Meter ..... ft. above bottom of weight.

Spin before meas. ..... after .....

Meas. plots .... % diff. from rating .....

Wading, cable, ice, boat, upstr., downstr., side bridge 50 feet, mile, above, below gage, and .....

Check-bar, found .....

changed to ..... at .....

Correct .....

Levels obtained .....

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section Mostly smooth, some cobble

Flow ..... Weather Cody, cloudy, overcast, blah

Other ..... Air .....°F@ 16.7 C

Gage ..... Water .....°F@ 11.6 C

..... Record removed ..... Intake flushed U L .....

Observer .....

.....

Control .....

.....

Remarks .....

Electro 240

PH 8.5

G. H. of zero flow ..... ft.

Gauge 245

1.5 / 24

Angle correment	Dist from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	Velocity At point	Velocity Mean in vertical	Adjusted for hor. angle or	Area	Discharge
	1.0	0.35	0				0	0			
	2.5	1.5	.35				~~2.60~~	1.33		.53	.70
	4.0	1.5	.37				~~3.32~~	1.76		.56	.99
	5.0	1.0	.56				~~4.09~~	2.00		.56	1.12
	6	1.0	.62				~~4.10~~	2.00		.62	1.24
	7	1.0	.60				~~3.51~~	1.72		.60	1.03
	8		.52				~~4.29~~	2.03		.52	1.06
	9		.50				~~3.63~~	1.99		.5	1.00
	10		.63				~~4.49~~	2.35		.63	1.48
	11		.72				~~4.82~~	2.18		.72	1.57
	12		.73				2.70			.73	1.97
	13		.80				2.59			.80	2.07
	14		.82				3.10			.82	2.54
	15		.87				2.93			.87	2.55
	16		.85				3.22			.85	2.74
	17		.79				3.25			.79	2.57
	18		.90				3.00			.90	2.70
	19		.91				3.02			.91	2.75
	20	1.25	.95				3.15			1.19	3.75
	21.5	1.50	.82				2.73			1.23	3.36
	23.0	1.50	.65				1.89			.98	1.85
	24.5	~~1.65~~ 1.75	0				0				39.04

.0 .10 .20 .30 .40 .50 .60 .70 .75

USAV2-0000344

9-276-P
(May 1971)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

DISCHARGE MEASUREMENT NOTES

Meas. No. .....
Comp. by .....
Checked by .....

Sta. No. .....
West Arawaipa

Date 11/28/93, 19 93 Party Sue Morgan

Width ..... Area ..... Vel. ..... G. H. ..... Disch. 44.09

Method ..... No. secs. ..... G. H. change ..... in ..... hrs. Susp. .....

Method coef. ..... Hor. angle coef. ..... Susp. coef. ..... Meter No. .....

GAGE READINGS				
Time		Recorder	Inside	Outside
			2.50	
Weighted M. G. H.				
G. H. correction				
Correct M. G. H.				

Type of meter Marsh McBirney

Date rated 11/28/93 for rod, other.

Meter ..... ft. above bottom of weight.

Spin before meas. ..... after .....

Meas. plots .... % diff. from rating .....

Wading, cable, ice, boat, upstr., downstr., side bridge 120 feet, mile, above, below gage, and .....

Check-bar, found .....

changed to ..... at .....

Correct .....

Levels obtained .....

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section Mostly smooth sand and cobble

Flow Average, slightly silty Weather Sunny, fair

Other ..... Air .....°F@ 18.9C

Gage ..... Water .....°F@ 13.6

..... Record removed ..... Intake flushed U L .....

Observer .....

Control .....

Remarks Electro 220
5 Fish hiding in gauging station

G. H. of zero flow ..... ft.

Bridger 2p (Gary Davis)
- Simpson - Horse & hoe 2p
2 wheel cart?

USAV2-00003442

Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for hor. angle or	Area	Discharge
	31.5	0	0								
	32.5	1.5	0					0			
	34.0	1.5	.10					.12		.15	.02
	35.5	1.5	.20					.60		.30	.12
	37.0		.48					1.62		.72	1.17
	38.5		.73					2.12		1.10	2.33
	40.0		.85					3.13		1.28	4.01
	41.5		[illegible]	1.0				3.21		1.50	4.82
	43.0		.99					3.27		1.49	4.87
	44.5		.89					3.47		1.34	4.65
	46.0		.90					3.23		1.35	4.36
	47.5		.80					3.19		1.20	3.83
	49.0		.73					3.10		1.10	3.41
	50.5		.70					2.90		1.05	3.05
	52.0		.75					2.89		1.13	3.27
	53.5		.70					2.48		1.05	2.60
	55.0		.55					1.83		.83	1.52
	56.5	1.5	.20					.20		.30	.06
	58.0	1.5	0					0			44.09

.0 .10 .20 .30 .40 .50 .60 .70 .75

USAV2-0000344